

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Canceled)

2. (Previously presented) The system according to claim 8, wherein said characteristic of said cooling fluid comprises at least one of volume flow rate, velocity and direction of cooling fluid removal.

3. (Previously presented) The system according to claim 8, further comprising:
at least one return controller operable to control at least one of said returns, wherein said at least one return controller is configured to substantially independently control said returns to thereby substantially independently vary said characteristic of said cooling fluid removal.

4. (Original) The system according to claim 3, further comprising:
a plurality of sensors configured to sense an environmental condition within said data center, said environmental condition including at least one of temperature, humidity, pressure, and cooling fluid flow rate, wherein said at least one return controller is configured to substantially independently control said returns in response to said measured environmental condition.

5-7. (Canceled)

8. (Currently amended) A cooling system for cooling racks in a data center, said system comprising:

a cooling device for circulating cooling fluid in said data center, said cooling device including a fan;

a plenum having a plurality of returns and an outlet, wherein said outlet of said plenum is in fluid communication with said fan, wherein said plurality of returns are configured for removing said cooling fluid from said data center and are operable to vary a characteristic of said removal of cooling fluid through said returns and wherein the plurality of returns are independent of the racks;

a vent plenum having a plurality of vent outlets and a vent inlet, wherein said vent inlet of said vent plenum is in fluid communication with said fan;

a plurality of vents for supplying said cooling fluid to said racks, wherein said vents are operable to vary a characteristic of said supply of cooling fluid through each of said vents; and

at least one vent controller operable to control at least one of said vents, wherein said at least one vent controller is configured to substantially independently control said vents to thereby substantially independently vary said characteristic of said cooling fluid supplied through said vents.

9. (Original) The system according to claim 8, wherein said vent controller is operable to substantially independently control said vents in response to at least one of said returns being varied.

10 and 11. (Canceled).

12. (Currently amended) A method of cooling a plurality of racks in a data center having a lowered ceiling, said method comprising:

activating a cooling system and opening a plurality of returns positioned at various locations along the lowered ceiling, said returns being configured to remove cooling fluid from various locations of said data center;

opening a plurality of vents configured to supply the racks with cooling fluid;

sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range;

varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range; and

varying a characteristic of cooling fluid flow through one or more of said plurality of vents in response to the sensed temperatures being outside said predetermined temperature range.

13-24. (Canceled).

25. (Currently amended) An apparatus for cooling a plurality of racks in a data center having a lowered ceiling, said apparatus comprising:

means for activating a cooling system and opening a plurality of returns positioned at various locations along the lowered ceiling, each of said returns being configured to remove cooling fluid from various locations of said data center;

means for opening a plurality of vents configured to supply the racks with cooling fluid;

means for sensing the temperatures of said racks;

means for determining whether said sensed temperatures are within a predetermined temperature range;

means for varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range; and

means for varying a characteristic of cooling fluid flow through one or more of said plurality of vents in response to the sensed temperatures being outside said predetermined temperature range.

26-37. (Canceled).

38. (Currently amended) A computer readable medium on which is embedded computer software, said software comprising executable code for performing a method of cooling a plurality of racks in a data center having a lowered ceiling, said method comprising:

activating a cooling system and opening a plurality of returns positioned at various locations along the lowered ceiling, each of said returns being configured to remove cooling fluid from various locations of said data center;

opening a plurality of vents configured to supply the racks with cooling fluid;

sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range;

varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range; and

varying a characteristic of cooling fluid flow through one or more of said plurality of vents in response to the sensed temperatures being outside said predetermined temperature range.

39-50. (Canceled).

51. (Previously presented) The system according to claim 4, wherein said plurality of sensors are configured to sense an environmental condition in locations outside of the plurality of racks and wherein the at least one controller is configured to substantially independently control said plurality of returns in response to said measured environmental condition out side of the racks.

52. (Previously presented) The system according to claim 8, wherein the plurality of returns includes fans configured to draw cooling fluid from the data center, wherein the fans are movable to vary a direction of cooling fluid removal.

53. (Canceled).

54. (Previously presented) The system according to claim 8, wherein the characteristic of said supply of cooling fluid comprises at least one of volume flow rate, velocity and direction of cooling fluid supply.

55. (Previously presented) The method according to claim 12, wherein the step of varying said removal of said cooling fluid from said racks comprises varying the direction of removal of said cooling fluid.

56. (Previously presented) The method according to claim 12, wherein the step of varying a characteristic of said cooling fluid flow through one or more of said plurality of vents comprises varying at least one of volume flow rate, velocity and direction of cooling fluid supply.

57. (Previously presented) The method according to claim 12, wherein the step of varying said removal of said cooling fluid from said racks comprises substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

58. (Previously presented) The method according to claim 12, wherein the step of varying a characteristic of said cooling fluid flow through one or more of the vents comprises substantially independently controlling said plurality of vents to thereby substantially independently vary said supply of said cooling fluid to said racks through said plurality of vents.

59. (Previously presented) The apparatus according to claim 25, wherein the various locations of said data center comprises a plurality of racks.

60. (Previously presented) The apparatus according to claim 25, wherein the means for varying said removal of said cooling fluid from said racks comprises means for varying the direction of said removal of said cooling fluid.

61. (Previously presented) The apparatus according to claim 25, wherein the means for varying a characteristic of said cooling fluid flow through one or more of said plurality of vents comprises means for varying at least one of volume flow rate, velocity and direction of cooling fluid supply.

62. (Previously presented) The apparatus according to claim 25, wherein the means for varying said removal of said cooling fluid from said racks comprises means for substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

63. (Previously presented) The apparatus according to claim 25, wherein the means for varying a characteristic of said cooling fluid flow through one or more of said plurality of vents comprises means for substantially independently controlling said plurality of vents to thereby substantially independently vary said supply of said cooling fluid to said racks through said plurality of vents.

64. (Previously presented) The computer readable medium according to claim 38, wherein the various locations of said data center comprises a plurality of racks.

65. (Previously presented) The computer readable medium according to claim 38, further comprising:
varying the direction of removal of said cooling fluid.

66. (Previously presented) The computer readable medium according to claim 38, further comprising:

varying at least one of volume flow rate, velocity and direction of cooling fluid supply.

67. (Previously presented) The computer readable medium according to claim 38, further comprising:

substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

68. (Previously presented) The computer readable medium according to claim 38, further comprising:

substantially independently controlling said plurality of vents to thereby substantially independently vary said supply of said cooling fluid to said racks through said plurality of vents.